

## ABSTRACT

A digital convolution apparatus, includes means (12) for determining a real-valued discrete-frequency representation of a desired digital filter and means (14) for transforming said discrete-frequency representation into a corresponding discrete-time representation. Means (16) circularly shift the discrete-time representation and means (18) apply a window to the discrete-time representation to produce a zero-padded reduced length filter. Thereafter means (24-36) convolve an input signal  $x[n]$  with the reduced length filter.

(Fig. 25)